KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT
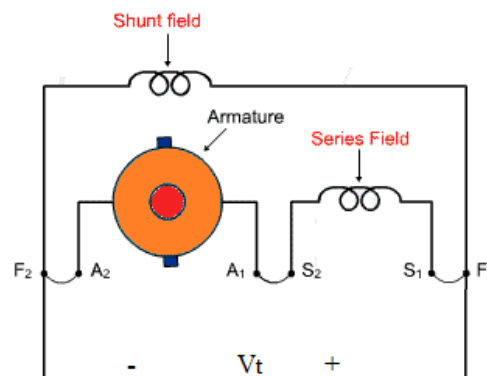
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EE-306

Key Solution

Quiz 4   Sec.: 4   I.D.:   Ser#:   Name:

Q.1 The figure below is for a short-shunt self-excited compound DC machine.   (3-points)

   a. True.

   b. False.

Q.2   In self-excited DC generators, the sequence of actions for building up the terminal voltage is   (4-points)

$$R_F \downarrow \; \to \; I_F \uparrow = \frac{V_T}{R_F \downarrow} \; \to \; \varphi \uparrow = \frac{N}{\mathfrak{R}} I_F \uparrow \; \to$$
$$E_A \uparrow = K' \varphi \uparrow n_m \; \to \; V_T \uparrow = E_A \uparrow - R_A I_A$$

   a. True.

   b. False.

Q.3 The speed regulation for any type of DC motors is always positive value, because the speed at no-load is larger than the speed at full-load.   (3-points)

   a. True.

   b. False.